USING IMPLEMENTATION SCIENCE TO REDUCE HEALTH DISPARITIES IN RACIAL AND ETHNIC MINORITIES WITH SERIOUS MENTAL ILLNESS

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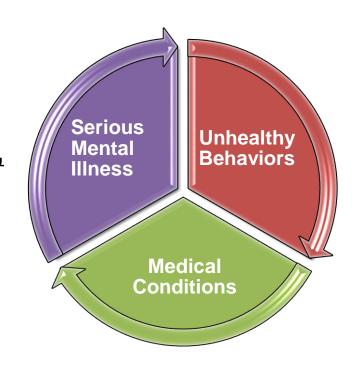
- **Research Assistants:** Morgan Dawkins, Kechna Cadet,Talhah Alvi, Katy Svehaug, Yamira Manrique
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The Cycle of Comorbidity

"**I'm sick from head to toe**" (Dominican women with depression, hypertension, diabetes, and arthritis).

"**If you have a problem with depression, you eat or smoke and it affects your heart**. So, your heart says to your mind: listen, I'm eating a lot or it affects your cholesterol or it affects the sugar . . . so that affects your mind . . . from there comes the depression to eat more. **The circle comes again to eat more and smoke more**" (Dominican man with schizophrenia, diabetes, and high cholesterol).

Source: Cabassa & Gomez, *Unpublished Report, 2014*

"Our patients, partly because of their illnesses. . . cultural and language issues, and. . . because the system is not very well organized **they often get lost in the system . . .**

The patients just get overwhelmed. . . you're not feeling well, you may have symptoms of psychosis; you don't speak the language, and you're trying to figure out what office to go to; **it can be overwhelming, and patients get frustrated and don't get the care that they need**"
(Administrator).

Health Care System

Mental Health Care System

Source: Ezell, Siantz & Cabassa, *JHCP&U,* 2013:24: 552–1573
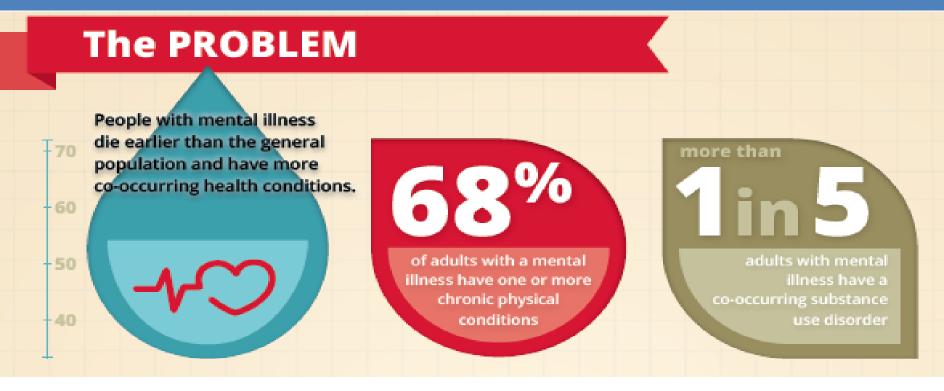
Objectives

- Discuss health disparities among Latinos with SMI

- Present factors that shape the health care experiences of Latinos with SMI

- Present how we culturally-adapted a health care manager intervention for Latinos with SMI

Angel Botello

The PROBLEM

People with mental illness die earlier than the general population and have more co-occurring health conditions.

70
60
50
40

68% of adults with a mental illness have one or more chronic physical conditions

more than **1 in 5** adults with mental illness have a co-occurring substance use disorder

Compared to the general population, people with SMI have shorter life expectancies (**20 years shorter for men; 15 years shorter for women**) largely due cardiovascular disease

Sources: Laursen et al., 2014; SAMHSA-HRSA Center for Integrated Health Solutions; Walker et al., 2015

Is There a Double Health Burden for Latinos with SMI?

Prevalence of cardiovascular risk factors among racial and ethnic minorities with schizophrenia spectrum and bipolar disorders: a critical literature review

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Sarah S. Joestl[g], Roberto Lewis-Fernández[c,d,h]

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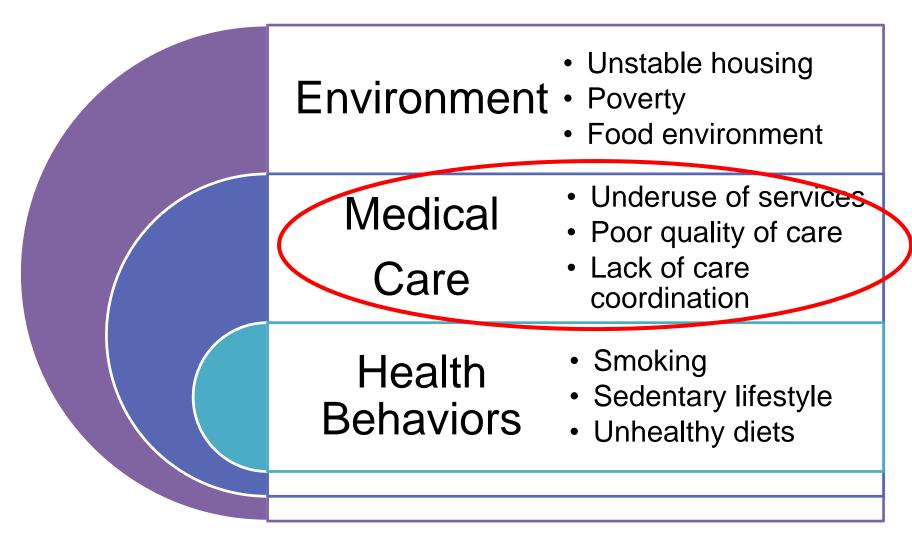[c]Department of Psychiatry, Columbia University, New York, NY, USA
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- Some evidence indicating increased risk for:
  - Cardiovascular-related mortality
  - Diabetes mellitus
  - Metabolic syndrome
  - Negative metabolic abnormalities (e.g., weight gain) associated with taking second-generation antipsychotic medications

- Evidence is inconclusive
  - Small samples sizes (n = 4-260)
  - Mostly clinical samples
  - Few analyses stratified by Latino sub-group and gender

Source: Carliner et al. *Com. Psych*, 2014, 55: 233-247

Modifiable Risk Factors

Environment
- Unstable housing
- Poverty
- Food environment

Medical Care
- Underuse of services
- Poor quality of care
- Lack of care coordination

Health Behaviors
- Smoking
- Sedentary lifestyle
- Unhealthy diets

Sources: Allison et al., 2009; Cabassa et al., 2014; Newcomer et al., 2007

ORIGINAL ARTICLE

Primary Health Care Experiences of Hispanics with Serious Mental Illness: A Mixed-Methods Study

Leopoldo J. Cabassa · Arminda P. Gomes · Quisqueya Meyreles ·
Lucia Capitelli · Richard Younge · Dianna Dragatsi · Juana Alvarez ·
Andel Nicasio · Benjamin Druss · Roberto Lewis-Fernández

Abstract This mixed-methods study examines the primary health care experiences of Hispanic patients with serious mental illness. Forty patients were recruited from an outpatient mental health clinic. Participants reported a combination of perceived discrimination and stigmatization when receiving medical care. They rated the quality of chronic illness care as poor and reported low levels of self-efficacy and patient activation. These indicators were positively associated with how patients viewed their relationships with primary care providers. A grounded model was developed to describe the structural, social, and interpersonal processes that shaped participants' primary care experiences.
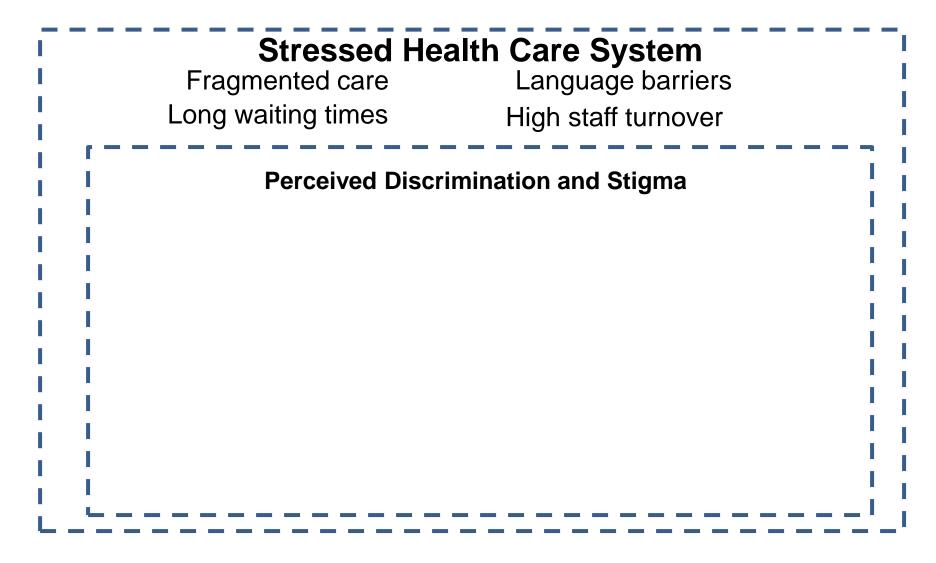
Introduction

Common medical conditions like heart disease, diabetes mellitus, and cancer disproportionally impact people with serious mental illness (SMI; e.g., schizophrenia, bipolar disorder) and account for a significant portion of the elevated mortality rates observed in this population (Druss et al. 2011). Hispanics with SMI may face even greater risk for these health disparities compared to non-Hispanic Whites with SMI as studies have shown elevated rates of common medical conditions (e.g., obesity, diabetes, metabolic syndrome) in this growing minority population

Primary Health Care Experiences of Latinos with SMI

Stressed Health Care System

Fragmented care

Long waiting times

Language barriers

High staff turnover

Perceived Discrimination and Stigma

Source: Cabassa et al., *Adm Policy Ment Health*. 2014:41:724-736

Perceived Discrimination and Stigma in the Health Care System (N = 40)
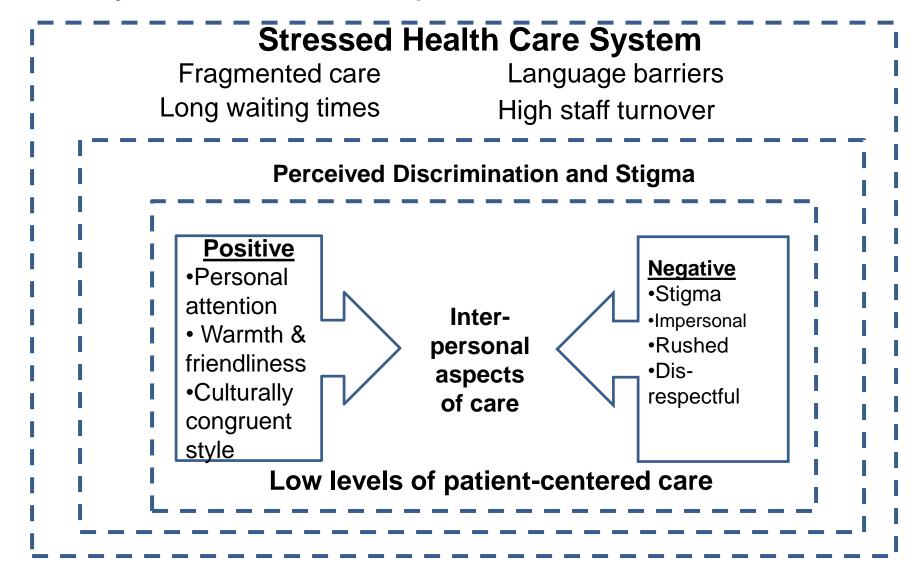
- 75% reported that racism is a problem in the health care system.

- People are treated unjustly in the health care system because:
  - They are Latino/a: 60%
  - They do not speak English very well: 68%
  - They have a serious mental illness: 65%
  - They are immigrants: 83%
  - They are Black: 65%

Source: Cabassa et al., *Adm Policy Ment Health*. 2014:41:724-736

Example of Stigma Experience

"One time it happened in the hospital. **<u>My stomach hurt and I kept telling them</u>**, but they just gave me a Tylenol. I ended up passing out. It was my appendix . . . **<u>They just did not believe me</u>**" (Puerto Rican female participant with schizophrenia).

Primary Health Care Experiences of Latinos with SMI

Stressed Health Care System

Fragmented care   Language barriers

Long waiting times   High staff turnover

Perceived Discrimination and Stigma

Positive
- Personal attention
- Warmth & friendliness
- Culturally congruent style

Inter-personal aspects of care

Negative
- Stigma
- Impersonal
- Rushed
- Dis-respectful

Low levels of patient-centered care

Health Care Manager Interventions Can Address Many of These Barriers to Care
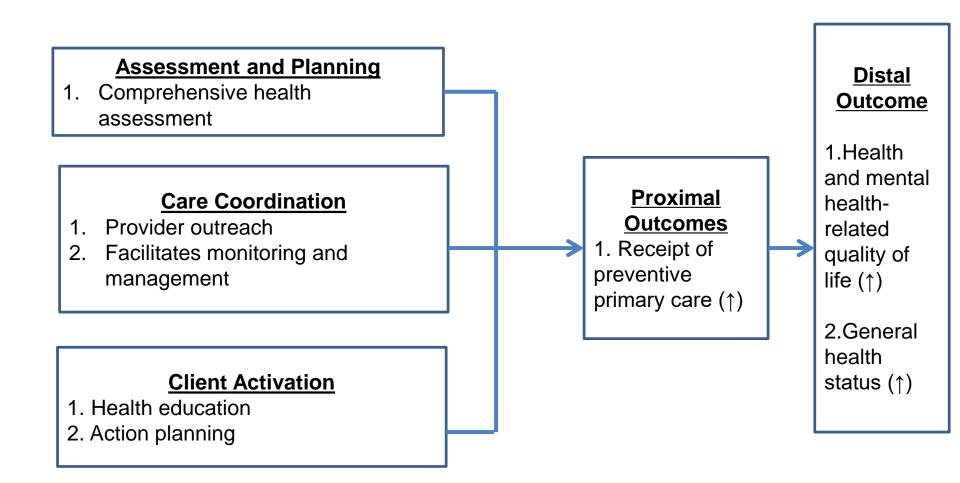
Care coordination/
System navigation $\longrightarrow$ Reduce fragmented care and language barriers

Goal setting
Patient activation
Problem solving $\longrightarrow$ Cope with perceived discrimination/stigma, improve patient-provider interactions, and increase patient-centered care

Sources: Bartels et al., 2004; Druss et al., 2010; Kilbourne et al., 2008

Primary Care Assessment Referral and Evaluation (PCARE) Intervention

Assessment and Planning
1. Comprehensive health assessment

Care Coordination
1. Provider outreach
2. Facilitates monitoring and management

Client Activation
1. Health education
2. Action planning

Proximal Outcomes
1. Receipt of preventive primary care (↑)

Distal Outcome

1.Health and mental health-related quality of life (↑)

2.General health status (↑)

Sources: Druss et al., 2010

Local Implementation Gap

- Use of health care manager interventions with Latina/os with SMI is unknown

- The influence of culture on the health care of people with SMI is often ignored

- Can social workers be health care managers?

Few systematic and collaborative intervention planning models exist to inform adaptations of health care manager interventions to local settings

Source: Cabassa et al. *Implement Sci.* 2011: 6:80

Local Context

- Public outpatient mental health clinic in Upper Manhattan

- Latina/o adults with serious mental illness

- Staffing
  - Social workers
  - Psychiatrists
  - Peer Specialist
  - Psychiatric nurses

- Patients referred to local primary care clinics for primary care services
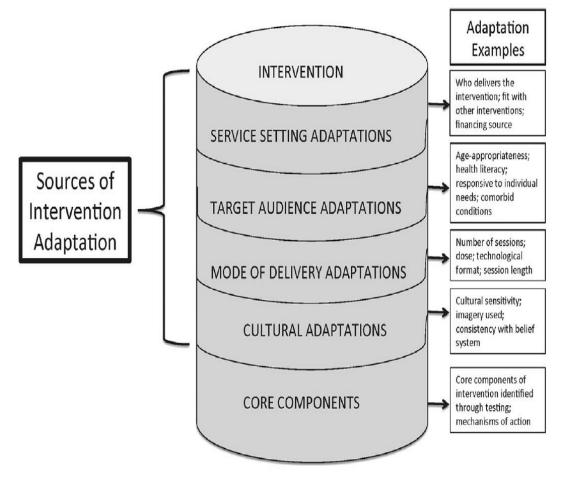
Why Adaptations are Needed in the Implementation of Interventions?
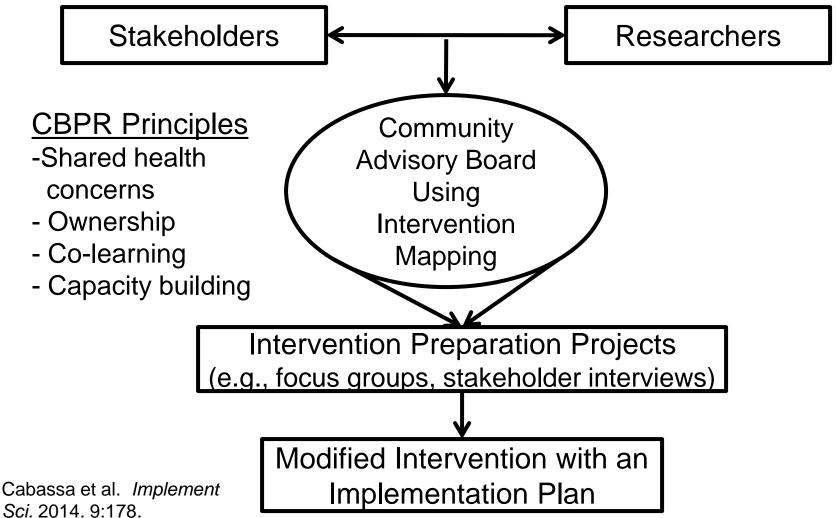
- Dynamic social process shaped by context

- Requires mutual-adaptation

- Collaborative endeavor

Sources of Intervention Adaptation

INTERVENTION

SERVICE SETTING ADAPTATIONS

TARGET AUDIENCE ADAPTATIONS

MODE OF DELIVERY ADAPTATIONS

CULTURAL ADAPTATIONS

CORE COMPONENTS

Adaptation Examples

Who delivers the intervention; fit with other interventions; financing source

Age-appropriateness; health literacy; responsive to individual needs; comorbid conditions

Number of sessions; dose; technological format; session length

Cultural sensitivity; imagery used; consistency with belief system

Core components of intervention identified through testing; mechanisms of action

Sources: Cabassa, 2016; Chambers et al., 2016; Proctor et al., 2009

Collaborative Intervention Planning Framework

Stakeholders ←——→ Researchers

CBPR Principles
-Shared health
  concerns
- Ownership
- Co-learning
- Capacity building

Community Advisory Board Using Intervention Mapping

Intervention Preparation Projects
(e.g., focus groups, stakeholder interviews)

Modified Intervention with an Implementation Plan
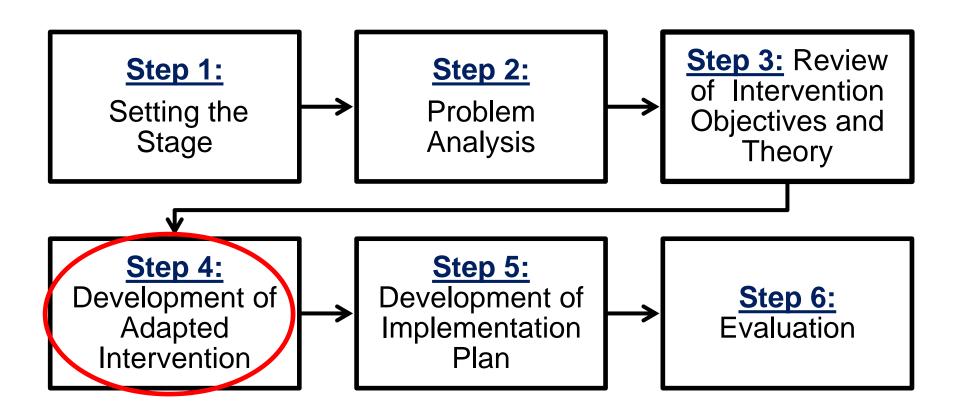
Cabassa et al. *Implement Sci.* 2014. 9:178.

Key Framework Characteristics

- CBPR principles helped foster partnership between stakeholders

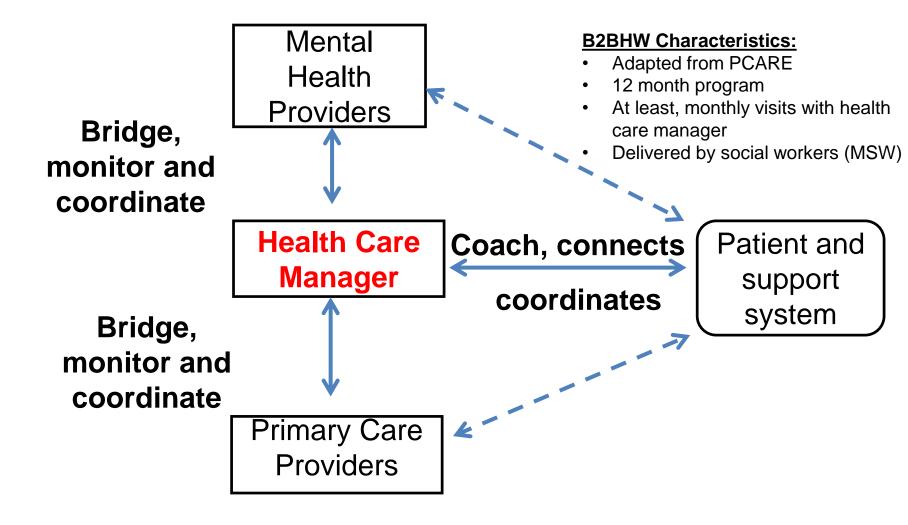- Intervention mapping provided the means of putting the partnership into action
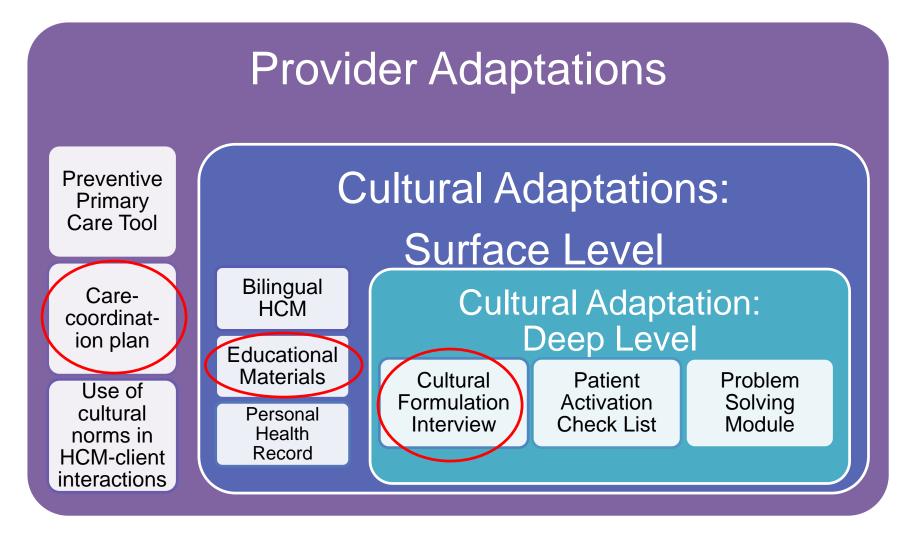
Intervention Mapping: Adaptation Steps

Step 1: Setting the Stage	→	**Step 2:** Problem Analysis	→	**Step 3:** Review of Intervention Objectives and Theory
Step 4: Development of Adapted Intervention	→	**Step 5:** Development of Implementation Plan	→	**Step 6:** Evaluation

Sources: Bartholomew et al., 2006; Tortolero et al., 2005

Bridges to Better Health and Wellness (B2BHW)

Mental Health Providers

Bridge, monitor and coordinate

Health Care Manager

Bridge, monitor and coordinate

Primary Care Providers

Coach, connects coordinates

Patient and support system

B2BHW Characteristics:
- Adapted from PCARE
- 12 month program
- At least, monthly visits with health care manager
- Delivered by social workers (MSW)

Provider and Cultural Adaptations

Provider Adaptations

- Preventive Primary Care Tool
- Care-coordinat-ion plan
- Use of cultural norms in HCM-client interactions

Cultural Adaptations: Surface Level

- Bilingual HCM
- Educational Materials
- Personal Health Record

Cultural Adaptation: Deep Level

- Cultural Formulation Interview
- Patient Activation Check List
- Problem Solving Module

Source: Cabassa et al. *Implement Sci.,* 2014. 9:178.
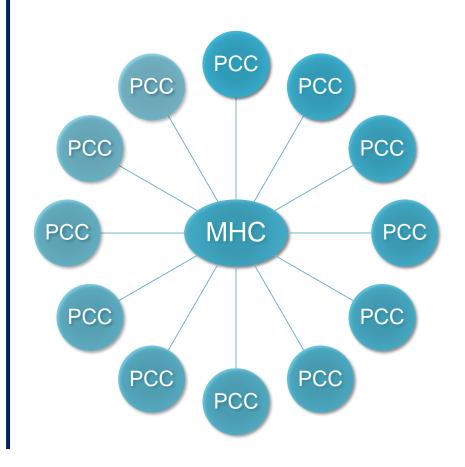
Provider Adaptations: Care Coordination

Original PCARE Trial

B2BHW Study
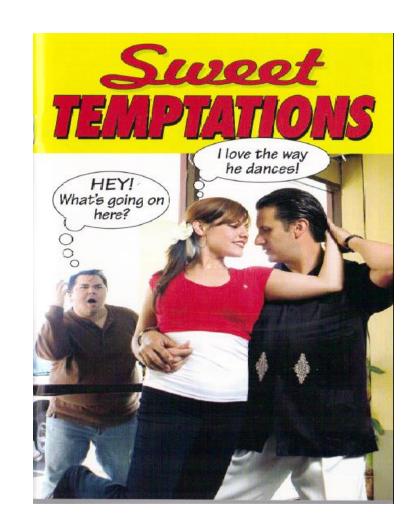
Cultural Adaptations (Surface Level): Health-Related *Fotonovelas*

- To improve clients' knowledge of health conditions

- To model appropriate interactions with medical providers

- To model self-management behaviors to cope with chronic medical conditions.

Cultural Adaptations (Deep Level): Cultural Formulation Interview for Health

Health Assessment

- Biographical data
- Family and emergency contacts
- Current medical providers
- Medical insurance
- Personal and social history
- Current medications
- Past medical history
- Mental health and substance abuse history
- Health literacy
- A short review of systems
- Preventive care history
- Health habits and patterns
- Vital signs (weight/height/blood pressure/waist circumference)

CFI-H

- Person-centered interview

- Focuses on the person's illness narrative

- Conveys *personalismo,* warmth, and respect

Sources: Cabassa et al., 2014; Lewis-Fernández et al., 2014

B2BHW Logic Model

Outcomes

Assessment and Planning
1. Comprehensive health assessment
   - **CFI for health**
   - **Attention to cultural norms and values**

Care Coordination
1. Provider outreach
   - **Care coordination plan**
   - **Personal health record**
2. Facilitates monitoring and management
   - **Preventive and CVD care tracking tool**

Client Activation
1. Health education
2. Action planning
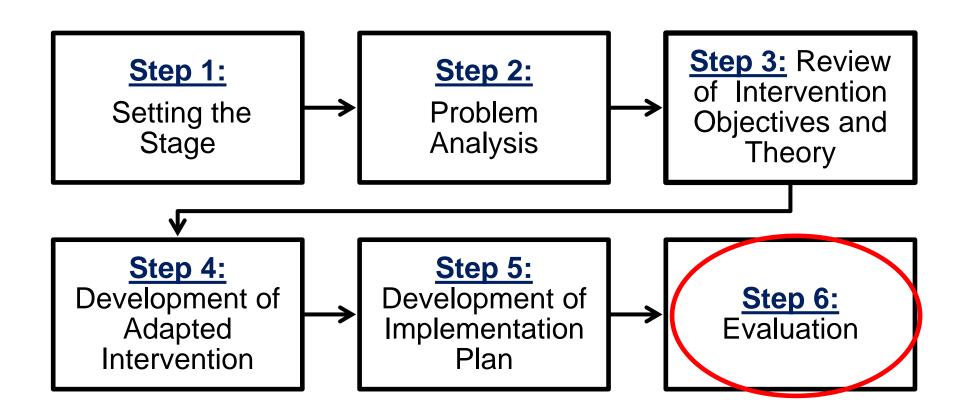3. **Problem-solving**
4. **Visit activation checklist**

Proximal Outcomes

1. Receipt of preventive primary care (↑)

2. Patient assessment of chronic Illness care (↑)

3. Patient activation (↑)

4. Self-efficacy (↑)

Distal Outcome

1. Health and mental health-related quality of life (↑)

2. General health status (↑)

Intervention Mapping: Adaptation Steps

Step 1: Setting the Stage	**Step 2:** Problem Analysis	**Step 3:** Review of Intervention Objectives and Theory
Step 4: Development of Adapted Intervention	**Step 5:** Development of Implementation Plan	**Step 6:** Evaluation

Study Aims

- Test **the feasibility** of delivering B2BHW using social workers

- Examine **the acceptability** of B2BHW among Latino clients

- Explore **intervention effects** on:
  - Patient activation
  - Self-efficacy
  - Perceptions of chronic illness care quality
  - Receipt of preventive primary care
  - Physical and mental health-related quality of life

Source: Cabassa et al., *Admin. & Pol. in Mental Health Services,* In Press

Methods

- **<u>Setting</u>**: Public outpatient mental health clinic serving predominantly Latino adults with SMI in New York City

- **<u>Design:</u>**
  - 12 month pre-post one-group design
  - Structured interviews and medical chart abstractions at baseline, 6, and 12 months
  - 3 post-intervention focus group

- **<u>Sample:</u>** N = 34 Latinos with SMI and at risk for cardiovascular disease

- **<u>Fidelity:</u>** Intervention manual, review and fidelity coding of audio recorded health care manager sessions, and monthly supervision meetings

- **<u>Analysis:</u>** Content analysis of focus group data and linear mixed model adjusting for health care manager assignment
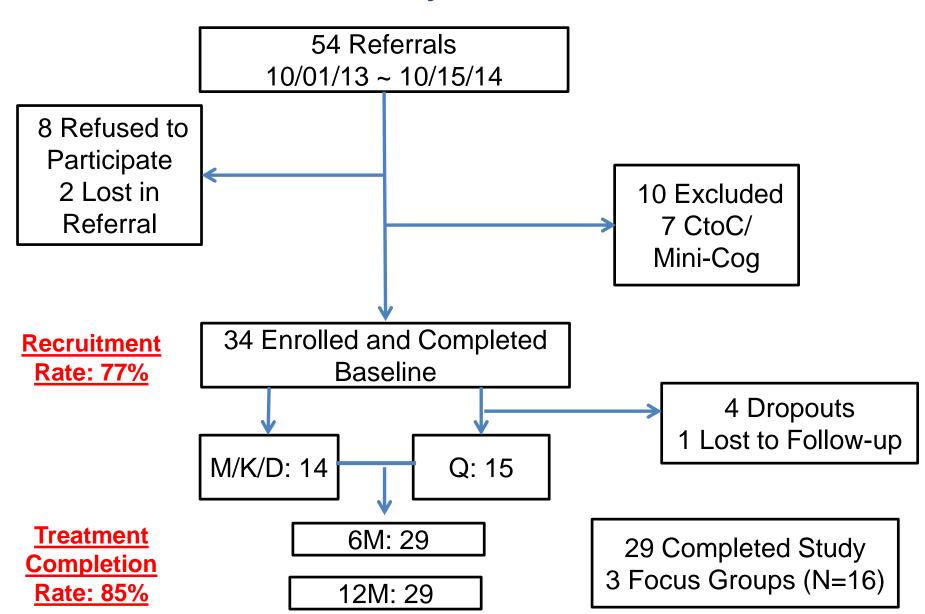
Measures

- **<u>Feasibility</u>**: Recruitment, assessment completion, and treatment attendance

- **<u>Acceptability</u>:** Client satisfaction questionnaire and focus group data

- **<u>Intervention Outcomes</u>:**
  - Patient activation
  - Self-efficacy
  - Patients' Assessment of Chronic Illness Care
  - Receipt of preventive primary care
  - Physical and mental health-related quality of life
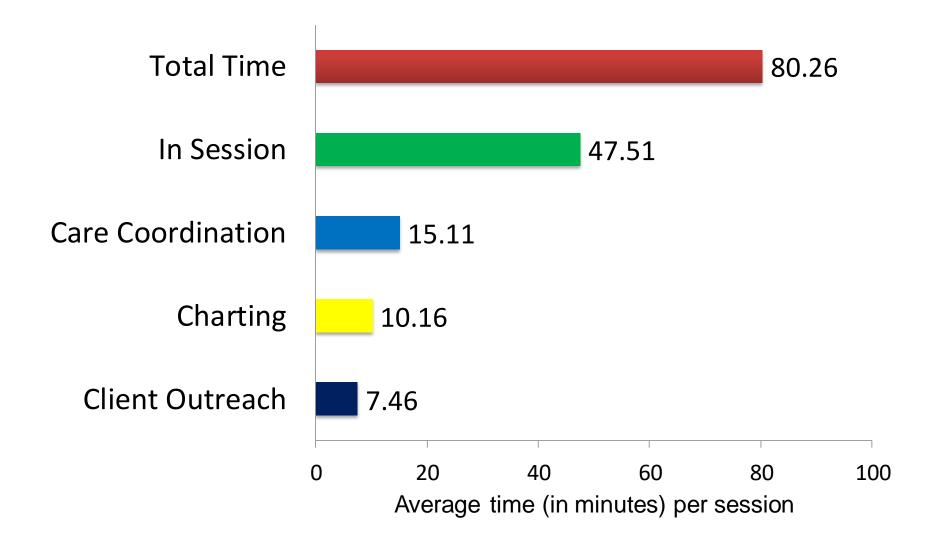
RESULTS

Study Flow

54 Referrals
10/01/13 ~ 10/15/14

8 Refused to Participate
2 Lost in Referral

10 Excluded
7 CtoC/
Mini-Cog

Recruitment Rate: 77%

34 Enrolled and Completed Baseline

4 Dropouts
1 Lost to Follow-up

M/K/D: 14

Q: 15

Treatment Completion Rate: 85%

6M: 29

12M: 29

29 Completed Study
3 Focus Groups (N=16)

Feasibility

- 85.3% (29/34) completed the intervention

- Average # of visits: 10.07 (sd = 1.79) out of 12, median 10, range 5-13
  - 93% attended 9 or more visits

- 5 people dropped out of the study
  - 4 by the second visit
  - 1 by the third visit

Health Care Manager Time

Average time (in minutes) per session

- Total Time: 80.26
- In Session: 47.51
- Care Coordination: 15.11
- Charting: 10.16
- Client Outreach: 7.46

Sample Characteristics (N = 34)

- Female = 67.6%

- Mean age = 54 (sd = 11.5),

- Mean years of education = 10.4(sd = 3.9)

- Place of Birth:
  - US: 11.8%
  - Dominican Republic: 73.5%
  - Puerto Rico: 2.9%
  - Other: 11.8%

- Language:
  - Monolingual Spanish: 73.5%
  - Bilingual: 26.5%

- Perceived health (Poor/Fair) = 64.7%
- Physical Health Chart Diagnoses:
  - Obese: 62.5%
  - High cholesterol: 75%
  - Diabetes: 47%
  - Hypertension: 62%
  - Arthritis: 21.9%

- Mean # of chronic medical conditions: 2.81 (sd = 1.62)
- Used Primary Care Services in the past 12 months: 97%
- Average number of visit past 12 months
  - Primary Care: 3.65 (sd = 2.52)
  - ER: 0.56 (sd = 1.07)
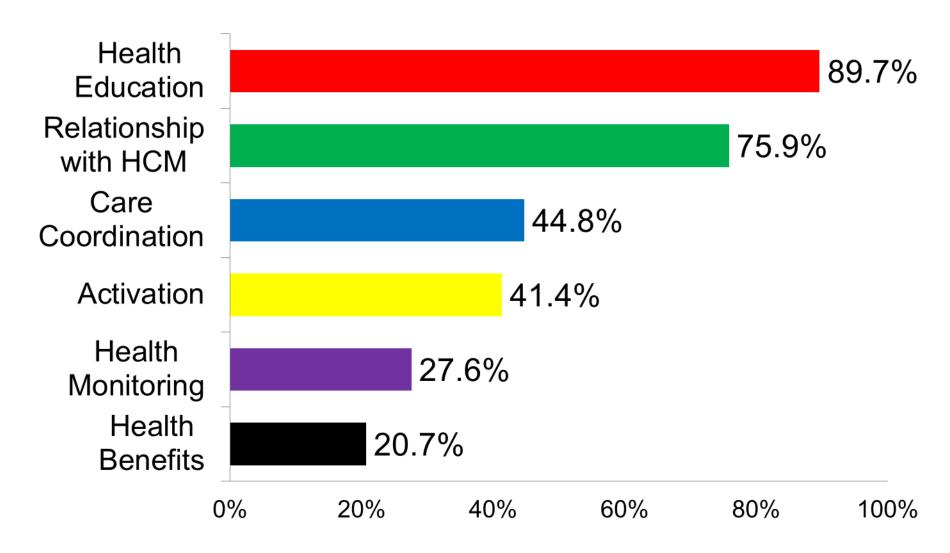
Mental Health Characteristics (N = 34)

- Mental Health Chart Diagnosis
  - Schizophrenia = 6.3%
  - Schizoaffective Disorder = 40.6%
  - Major Depression = 25%
  - Bipolar Disorder = 25%
  - Major Depression with Psychotic Features = 18.8%

- Mean # of hospitalizations for MH in past 12 months: 0.59 (1.28), range (0-7)

- Mean # of ER visits for mental disorders in the past 12 Months: 0.65 (1.30), range (0-7)

Acceptability of B2BHW (N = 29)

- 93% rated the quality of services as good/excellent

- 86% indicated B2BHW met most/all of their health needs

- 97% were mostly/very satisfied with the amount of help they received from B2BHW

- 100% reported that:
  - B2BHW helped them deal more effectively with their physical health

  - Would recommend B2BHW to a friend

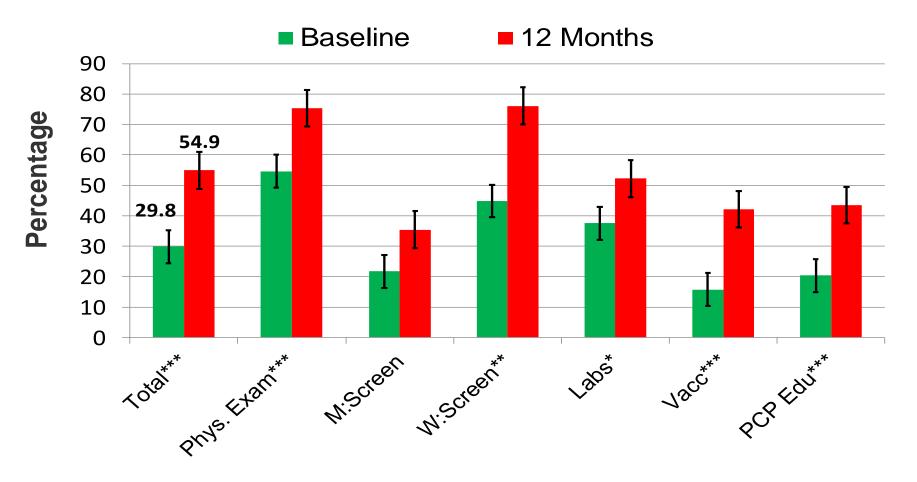# What Participants Liked Most about B2BHW (N = 29)

Category	%
Health Education	89.7%
Relationship with HCM	75.9%
Care Coordination	44.8%
Activation	41.4%
Health Monitoring	27.6%
Health Benefits	20.7%

B2BHW INITIAL IMPACT

Patient-Centered and Health Outcomes

➢ Significant improvements in patient-centered outcomes from baseline to 12 months:

> ➢ **Patient Activation**: 56.8 to 72.03, p < 0.01, ES = 0.56
> ➢ **Self-Efficacy**:
>> ➢ Talking with doctor: 7.62 to 8.89, p < 0.01, ES = 0.49
>> ➢ Managing chronic illness: 5.57 to 6.88, p < 0.01, ES = 0.55
> ➢ **Patients' Assessment of Chronic Illness Care**: **Health Care Manager:** Total: 2.81 to 4.08, p < 0.01, ES = 0.63

➢ No significant improvements in health- related quality of life (SF-12) and health outcomes (e.g., weight, blood pressure) were found

Receipt of Preventive Primary Care Services

Note: Adjusted for HCM assignment * $p \leq 0.05$, ** $p \leq 0.01$, ***$p \leq 0.001$

Discussion

- Latina/os with SMI face a constellation of barriers accessing and using primary care

- Culturally-adapted health care manager programs like B2BHW can help reduce these barriers

- B2BHW was feasible to deliver by social workers

- Over the course of 12-months, we saw significant improvements in:
  - Patient activation
  - Self-efficacy
  - Patients' assessment of the chronic illness care
  - Receipt of preventive primary care services

Limitations

- One site

- Early adopters

- Small sample

- Single-group design

Conclusions

➢ Local adaptations can help address local needs and local implementation gaps

➢ Adapting interventions with stakeholders rather than for stakeholders

➢ Develop the science of adaptations: replication and effectiveness

Thank You // Gracias

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